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VIA FEDERAL EXPRESS

December 3, 1990

Mr. Eduardo Gonzalez
Emergency and Remedial Response Division
Western New York Remedial Action Section
U.S. Environmental Protection Agency,
 Region II
26 Federal Plaza, Room 29-102
New York, New York 10278

RE: Morse Chain Division
Borg-Warner Corporation
CERCLA 104(e) Request For Information Byron Barrel Superfund Site ("Byron Barrel Site")
Our File No. 14356-14001

Dear Mr. Gonzalez:

This correspondence responds on behalf of the Morse Chain Division of Borg-Warner Corporation ("Borg-Warner") to the United States Environmental Protection Agency's ("U.S. EPA") request for information dated October 26, 1990 ("Request") regarding the above-referenced site pursuant to Section of Environmental Response, the Comprehensive Compensation and Liability Act ("CERCLA"). Borg-Warner received the Request on October 29, 1990. The date for Borg-Warner's mailing response was extended 1990 on November 13, 1990 pursuant to December 3, agreement between Thomas D. Lupo, on behalf of Borg-Warner, and Michael Mintzer, on behalf of U.S. EPA, Region II.

Borg-Warner submits its response to Request No. 12 subject to the Business Confidentiality provisions of CERCLA Section 104(e)(7) and 40 C.F.R. Part 2, Subpart B.

Borg-Warner's responses provide relevant information reasonably available to the Company regarding material picked up from a former Borg-Warner facility, located at 620

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South Aurora Street, Ithaca, New York, ("the South Aurora Street facility") by any companies or individuals listed in Request No. 4. Borg-Warner believed at the time and believes today that any pickup of materials by the recognized entities from the Morse Chain facility was conducted for purposes of re-refining or recycling.

Borg-Warner no longer owns or operates the South Aurora Street facility. Borg-Warner sold the South Aurora Street facility to Emerson Electric Company on December 31, 1982.

Borg-Warner has conducted a thorough document search regarding the pickup of materials from the South Aurora Street facility including an examination of documents in Borg-Warner's possession and of those in the possession of Emerson Electric. Although Borg-Warner no longer has access to documents in Emerson Electric's possession, Borg-Warner believes that all documents relative to the Byron Barrel Site were reviewed. Borg-Warner objects to the information request to the extent that it requires the submission of information or documents not in the possession of Borg-Warner and not based on Borg-Warner's personal knowledge.

Borg-Warner expressly reserves any and all objections that it may have regarding the procedural or substantive propriety of this request for information and by making this response does not waive any privilege, including the Attorney-Client Privilege and Attorney Work Product

Borg-Warner's investigation revealed that its South Aurora Street, Ithaca, New York facility had materials picked up by City Waste Oil and Tank Cleaning Service, and Waste Oil and Tank Cleaning Systems, Inc., with a Mr. William J. Uhl apparently acting as their agent (hereinafter referred to as "the recognized entities").

This document search was conducted in June 1986 in response to the litigation known as the <u>City of New York v. Exxon Corporation</u>, et al., Cause No. 85 Civ. 1939, U.S. District Court, S.D.N.Y. The review was part of a comprehensive review of waste disposal records at the South Aurora Street facility, which Emerson Electric then owned.

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Doctrine. Moreover, Borg-Warner expressly reserves any and all objections it may have to U.S. EPA's or to any other person's or entity's ability to obtain, copy, or use the information provided herein in any legal action or proceeding, present or future, that may be commenced against it.

Nothing in this response shall be deemed an admission that Borg-Warner generated, handled, transported, treated, stored or disposed of any hazardous substances, hazardous wastes, industrial wastes or oil which may have been picked up from Borg-Warner's facility and/or which may be involved in an alleged release or threat of a release at the Byron Barrel Site. Borg-Warner also retains the right to update or to supplement this response should additional, relevant information become available at a later date.

Borg-Warner does not believe its materials were ever delivered to the Byron Barrel Site. Borg-Warner has no knowledge of the ultimate destination of its direct materials after pickup by the recognized entities for According to recipients of the re-refining or recycling. CERCLA Section 106 Order, Mr. William J. Uhl, Sr. has stated that no drums or materials were delivered from his control or his facilities to the Byron Barrel Site prior to 1979. Borg-Warner's relationship with the recognized entities or individuals is limited to the period June 2, 1977 to May 2, 1978, and pre-dates the period of drum and material shipment to the Byron Barrel Site. Hence, none of the substances disposed of at the site were generated by Borg-Warner, and Borg-Warner is not properly named as a potentially responsible party at the Byron Barrel Site.

REQUEST FOR INFORMATION

1. a. State the correct legal name of the company.

Response to Request No. 1(a): Borg-Warner Corporation.

b. Identify the legal status of the company (corporation, partnership, sole proprietorship, specify if other) and the state in which the company was organized.

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Response to Request No. 1(b): Borg-Warner Corporation is a Delaware corporation.

c. State the names(s) and address(es) of the President and the Chairperson of the Board of the company.

Response to Request No. 1(c):

James F. Bere'
Director, Chairman of the Board
and Chief Executive Officer
Borg-Warner Corporation
200 South Michigan Avenue
Chicago, IL 60604.

d. If the company has subsidiaries or affiliates, or is a subsidiary of another organization, identify these related companies and state the names(s) and address(es) of the President(s) and the Chairperson(s) of the Board of those organizations. Provide such information for any further parent/subsidiary relationships.

Response to Request No. 1(d): Borg-Warner has limited its response to information respecting Borg-Warner's formerly-owned South Aurora Street facility which had a relationship with or materials picked up by the recognized entities listed in Request No. 4 during the Applicable Period. The South Aurora Street facility was part of the Morse Chain Division of the old Borg-Warner Corporation, a predecessor in interest to the present Borg-Warner Corporation. As stated above, Borg-Warner sold the South Aurora Street facility to Emerson Electric on December 31, 1982.

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e. If the company is a successor to another company, identify such other company and provide the same information requested above for the predecessor company.

Response to Request No. 1(e): The Respondent Borg-Warner Corporation is a successor in interest to the old Borg-Warner Corporation. The following information applied to the former company:

- (a) Borg-Warner Corporation
- (b) Borg-Warner Corporation was a Delaware corporation
- (c) James F. Bere'
 Director, Chairman of the Board
 and Chief Executive Officer
 Borg-Warner Corporation
 200 South Michigan Avenue
 Chicago, IL 60604
- (d) See Response No. 1(d).
- 2. List all of the facilities presently or formerly owned and/or operated by the company that generated, handled, transported, treated, stored, or disposed of hazardous substances, hazardous wastes, industrial wastes, or oil between 1975 and 1983, separately identifying those facilities that employed oil at the facility where such oil, after use, was transported, treated, stored, or disposed of. For each such facility, state its name, address, and current RCRA Identification Number, and the nature of the operations conducted at the facility during the Applicable Period.

Response to Request No. 2: Borg-Warner has limited its response to information respecting Borg-Warner's South Aurora Street facility which had a relationship with or materials picked up by the recognized entities listed in Request No. 4 during the Applicable Period.

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The facility, which formerly was owned and operated by Borg-Warner during the Applicable Period, is the former 620 South Aurora Street, Ithaca, New York, Morse Chain facility. Borg-Warner sold the South Aurora Street facility to Emerson Electric Company on December 31, 1982. During the Applicable Period, the following information applied:

South Aurora Street Plant

- a. Morse Chain Division of Borg-Warner Corporation
- b. 620 South Aurora Street Ithaca, New York 14850
- c. Unknown.
- d. Manufacture of industrial and automotive transmission and engine components.

The South Aurora Street plant employed oil at the facility which after use was transported from the facility.

3. State the nature of your business at the facilities identified in the previous question.

Response to Request No. 3: Manufacture of industrial and automotive transmission and engine components.

- 4. For the Applicable Period, state whether the company or any company facility transacted any business for the disposal, treatment, storage or resale of hazardous substances or oil with any of the following entities:
 - a. City Oil Services, Inc.
 - b. City Oil

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- City Oil Services c.
- ٠đ. City Waste Oil, Inc.
- e. City Waste Oil
- f. City Waste Oil Services
- Uhl Oil Services or Uhl Oil Services, Inc.
- h. City Waste Oil and Tank Cleaning Systems, Inc.
- i. City Waste Oil and Tank Cleaning Service
- j. Waste Oil & Tank Cleaning Systems k. Waste Oil & Tank Cleaning Service
- Waste Oil and Tank Cleaning Systems, Inc. 1.
- m. Waste Oil Cleaning Systems
- n. Smith and Lockwood, Inc.
- Flowen Oil Delaware Valley, Inc. 0.
- Rochester Oil Products p.
- William J. Uhl, Sr. (also known as William J. Uhl q. and William Uhl)
- William J. Uhl, Jr. r.
- Darrell L. Freeman, Jr. s.

Response to Request No. 4: Borg-Warner's South Aurora Street facility did not transact business for the disposal, treatment, storage or resale of hazardous substances or oil with any of the listed entities or individuals. Between mid-1977 and early-1978, the entities known as City Waste Oil and Tank Cleaning Service, and Waste Oil and Tank Cleaning Systems, Inc., with both William J. Uhl, Sr. and William J. Uhl, Jr. apparently acting as their agents or employees ("the recognized entities"), picked up materials from Borg-Warner's South Aurora Street facility. Warner believed at the time and believes today that the recognized entities collected Borg-Warner's materials from Borg-Warner's formerly-owned South Aurora Street facility for the purpose of re-refining or recycling.

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5. If the company transacted business with any of the entities identified in the previous question in the Applicable Period, provide the following information for each transaction;

General Response to Request No. 5: Borg-Warner limits its responses to Request No. 5 and its subparts to relationships with or materials picked up by the recognized entities in the Applicable Period.

a. Identify the dates of each transaction.

Response to Request No. 5(a): Responsive information is reflected on the attached documents. An individual transaction may be represented by many different documents (invoice, receipt, manifest, pickup log and/or ledger entry). Any attempt by U.S. EPA to assign transaction dates to Borg-Warner using these documents should avoid repetitive counting.

b. Describe the materials or items that may have been given, sold, transferred, or delivered to any of the entities, including type of material, chemical content, physical state, quantity by volume and weight, and other characteristics.

Response to Request No. 5(b): Information responsive to Request 5(b) is reflected on the attached documents. An individual transaction may be represented by many different

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documents (invoice, receipt, manifest, pickup log and/or ledger entry). Any attempt by U.S. EPA to assign a waste volume to Borg-Warner using these documents should avoid repetitive counting.

The oil itself turned over to the recognized entities is covered by the CERCLA Petroleum Exclusion and thus is not a "hazardous substance." CERCLA Sections 101(14) U.S. EPA guidance analyzing the petroleum 104(a)(2). exclusion appears in U.S. EPA Directive Number 9838.1, entitled "Memorandum: Scope of the CERCLA Petroleum Exclusion Under Section 101(14) and 104(a)(2)," dated July 31, 1987. The EPA memorandum states, in part:

"hazardous substances which are added to petroleum or which increase in concentration solely as a result of contamination of the petroleum during use are not a part of the "petroleum" and thus are not excluded from CERCLA under the exclusion. In such cases, EPA may respond to releases of the added hazardous substance, but not the oil itself."

EPA memorandum at p. 5-6. (Emphasis added) Accordingly, it is not appropriate to include the oil component of Borg-Warner's oil picked up by the recognized entities in calculating any volumetric allocation for the Company under CERCLA.

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According to recipients of the CERCLA Section 106 Order, the recognized entities released much of the water collected in oil and water pickups into the Rochester, New York, sewer system and removed the remaining water from the oil and water pickups through a boiling process. The volume of the water content picked up from the South Aurora Street facility is stated on each pickup receipt. Any attempt to assign a waste volume to Borg-Warner should not include the water volumes reflected on the pickup receipts.

- c. Describe the intended purpose of each such transaction.
- Response to Request No. 5(c): Borg-Warner believed at the time and believes today that the recognized entities collected Borg-Warner's materials for re-refining or recycling.
 - d. Describe in detail the process that produced the materials that may have been sold, transferred or delivered or, if not produced in a process, describe in detail the other source of such materials.

Response to Request No. 5(d): The materials picked up by the recognized entities resulted from the parts hardening

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and quenching process of the manufacturing operations utilized at the South Aurora Street facility during the Applicable Period.

During the Applicable Period, cutting oil was used as a lubricant and a coolant to protect the life of punch press machinery tooling. This cutting oil may have been added to the collecting tanks from which the recognized entities picked up materials.

A small amount of lubricating oil from vehicles, fork lift trucks and gear boxes may have been added to the collecting tanks.

e. Produce copies of all documents (see attached "Instructions For Responding to Request for Information for the meaning of the term "documents"), relating in any way to each transaction.

Response to Request No. 5(e): Responsive documents are attached.

f. Identify all persons who might have knowledge of the transaction or who had any responsibility regarding the transaction.

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Response to Request No. 5(f) The following people may have knowledge of the transactions:

Mr. Adam Bennett Borg-Warner Automotive 800 Warren Road Ithaca, NY 14850

Mr. William Tompkins (retired)
Former Manager of Plant Engineering

Mr. Larry Ames Emerson Electric 620 South Aurora Street Ithaca, NY 14850

Mr. Roger Sherman (retired)
Former Director of Plant Maintenance

g. State how the substances were containerized, whether in bulk, etc.

Response to Request No. 5(g): Borg-Warner placed its materials into collecting tanks and 55-gallon drums from which the recognized entities pumped the materials into their trucks. The 55-gallon drums originally contained quenching oil, cutting oil or lubricating oil.

h. State whether any chemical analyses of the substances were ever done and if so, produce copies of all documents relating in any way to the analyses.

Response to Request No. 5(h): Borg-Warner has conducted a review for and has not located any documents relating to analysis of materials picked up by the recognized entities

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other than the oil/water content breakdowns appearing on the attached documents.

i. Identify the destination of the hazardous substances, hazardous waste, industrial waste, or oil.

Response to Request No. 5(i): Borg-Warner has no direct knowledge of the ultimate destination of its materials which were picked up by the recognized entities. Borg-Warner believed at the time and believes today that its materials were picked up by the recognized entities for re-refining or recycling. For the reasons discussed throughout the introduction and Borg-Warner's responses to the individual information requests, Borg-Warner does not believe that the Byron Barrel Site was the destination of any of Borg-Warner's materials.

j. Identify the financial arrangements concerning such transaction: the amount paid by the company or the amount payable to the company in connection with the transaction and the method of payment. Unless produced in response to any other question, produce copies of all cancelled checks, invoices, or statements, and copies of all entries in any ledger or other financial books of account relating thereto.

Response to Request No. 5(j): Financial arrangements concerning interaction with the recognized entities is reflected in the attached documents.

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6. If the company transacted business with any of the entities identified in the question number 4 during the Applicable Period, describe in detail the business conducted at the company's facility from which such transaction occurred. In your response, identify each item produced or manufactured. For each item produced or manufactured, identify or describe:

General Response to Request No. 6: Borg-Warner limits its responses to Request No. 6 and its subparts to relationships with or materials picked up by the recognized entities during the Applicable Period.

a. the business conducted by the company at the facility;

Response to Request 6(a): Borg-Warner's Morse Chain South Aurora Street facility manufactured industrial and automotive transmission and engine components.

b. the process involved in the production and/or manufacture of any items produced or manufactured at the facility that generated waste of any kind (please include schematic drawings of these processes);

Response to Request No. 6(b): See Borg-Warner's Response to Request No. 5(d).

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c. all oil or water used in or in connection with this process;

Response to Request No. 6(c): Borg-Warner used quench oil, cutting oil, lubricating oils and water in the processes described in Borg-Warner's Response to Request No. 5(d).

d. all oil or water generated as waste in connection with this process, including a description of all materials that the oil or water may have contacted from the time of arrival of such oil or water at the facility until the time of its disposal;

Response to Request No. 6(d): Oil and water generated in these processes are reflected in the attached documents. Oil and water contacted steel parts in the processes described in Borg-Warner's Response to Request No. 5(d). A low concentration of biodegradeable detergents were sometimes added to the water used to flush oil from the hardened parts.

e. the characteristics of the waste oil and the waste water generated from each of the processes;

Response to Request No. 6(e): The oil and water remaining after the processes described in Response No. 5(d) were in liquid form.

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h.

- f. any use or re-use of this oil prior to its application in the described processes; Response to Request No. 6(f): The oil used in the process described in Response No. 5(d) was not previously used.
 - all materials that waste oil or waste water may g. have contacted in the process in which it was used, answering separately for each separate stream of waste oil and waste water;

Response to Request No. 6(g): The oil and water contacted steel parts in the processes described in Borg-Warner's Response No. 5(d). A low concentration of biodegradeable detergents were sometimes added to the water used to flush oil from the hardened parts.

the purpose served by oil or water in the process and provide schematic drawings of the process; Response to Request No. 6(h): The quenching oil served to quickly harden and draw heat from the metal parts, and water was used to wash oil from the hardened parts. The cutting oil served to prevent overheating of the punch press machinery tooling during the parts cutting process. from vehicles, forklift trucks and machinery gearboxes served to lubricate the respective motors.

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- i. whether waste oil or waste water was reused and identify the standards for reuse or disposal;

 Response to Request No. 6(i): The oil and water used in the processes described in Response to Request 5(d) was not reused.
 - j. each of the suppliers of oil used during the Applicable Period, and the price paid for oil, separately identifying each different type of oil (cutting, lubricating, fuel, gear, etc.);

Response to Request No. 6(j): Borg-Warner objects to the scope of this request as being overbroad and irrelevant and unlikely to lead to further relevant evidence. Notwithstanding this objection, Borg-Warner responds that it does not possess documents bearing this information but responds that Mobil Oil Company was its primary supplier of most of the petroleum products used in the processes described in Borg-Warner's Response to Request No. 5(d) during the Applicable Period.

k. whether any waste oil from motor vehicles was disposed of from the facility and, if the answer is yes, describe how such waste oil was disposed of;

Response to Request No. 6(k): Oil from motor vehicles used at the plant sometimes may have been included in the materials picked up by the recognized entities.

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1. whether any waste oil disposed of from the facility contacted grease prior to disposal and, if the answer is yes, provide specific details including the nature, composition and use of such grease.

Response to Request No. 6(1): The materials picked up by the recognized entities did not contact grease.

7. If the company did not use any of the entities listed in question number 4, identify each and every entity that the company transacted business with during the Applicable Period for the transport, storage, treatment, or disposal of hazardous substances, hazardous wastes, industrial wastes, or oil.

Response to Request No. 7: Not applicable.

8. For the Applicable Period, describe how wastes used by the company were disposed of, produce all documents relating thereto, and identify all persons with knowledge of the waste disposal practices of the company and its facilities and correlate each company facility with the person identified.

Response to Request No. 8: Borg-Warner limits its Response to Request No. 8 to materials picked up by the recognized entities for the Applicable Period. Borg-Warner does not have knowledge that its materials were ever disposed of and believes that the recognized entities picked up the materials for re-refining or recycling.

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9. Identify each person consulted in responding to these questions and correlate each person to the question on which he or she was consulted.

Response to Request No. 9:

Adam Bennett
Purchasing Agent
Borg-Warner Automotive
800 Warren Road
Ithaca, NY 14850
Consulted on Request
Nos. 2, 3, 4, 5, 6, 8,
10, 14.

Gaspare G. Ruggirello, Esq. Borg-Warner Corporation
Law Department
200 South Michigan Avenue
Chicago, IL 60604
Consulted on Request
Nos. 1, 2, 11, 12, 13.

Borg-Warner also consulted the discovery deposition of Mr. William Tompkins, former Manager of Plant Engineering, taken in the case of <u>The City of New York v. Exxon Corporation</u>, et al., Cause No. 85 Civ. 1939, U.S. District Court, S.D.N.Y.

10. Identify any other person (e.g., individual, company, partnership, etc.) having knowledge of facts relating to the generation, handling, transportation, storage or disposal of materials at the Site. For each such person that you identify, provide the name, address, and telephone number of that person, and the basis of your belief that he or she has such knowledge. For past and present employees, include their job title and a description of their responsibilities.

Response to Request No. 10: Borg-Warner does not know any person having knowledge of facts relating to the generation, handling, transportation, storage or disposal of materials at the Site.

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11. Provide a list of all liability insurance policies (including comprehensive general liability, environmental liability insurance, automobile liability insurance, directors and officers liability insurance, or other) maintained or held by the company for the Applicable Period. Provide also the name, address, and telephone number of any insurance broker or agent that may have arranged insurance coverage for the company.

Response to Request No. 11: General liability insurance policies purchased by Borg-Warner during the period 1975 to 1986 potentially are applicable to environmental actions. Whether Borg-Warner's liability insurance provides coverage for similar environmental actions pertaining to the South Aurora Street facility during the relevant time period is presently the subject of litigation in Borg-Warner v. Liberty Mutual, No. 88-539 (N.Y. Sup. Ct., Tompkins County, filed April 1, 1988).

12. State whether there exists any agreement or contract (other than an insurance policy) which may indemnify the company, present or past directors, officers or owners of shares in the company, for any liability that may result under CERCLA. Provide a copy of any such agreement or contract, including a copy of the agreement dated November 2, 1982 if you contend that such agreement provides for indemnity or a shift of liability for responsibility for the Site. Identify any agreement or contract that you are unable to locate or obtain.

Response to Request No. 12: Borg-Warner's responsive document is attached. Borg-Warner makes a claim of business confidentiality respecting the attached document.

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13. Provide certified financial statements for the most recent three fiscal years, if available, or if unavailable, a copy of the federal income tax return for each of the most recent three fiscal years, together with a statement certified by a knowledgeable person, stating whether there have been any material changes in such company's or person's financial status as reflected on such statement to a date within thirty days of the date of your response, and if there have been such material changes, describe such changes.

Response to Request No. 13: Borg-Warner objects to Request No. 13 on the grounds that it is beyond the scope of this information request and is not likely to lead to information respecting the handling, release or threatened release of hazardous wastes.

14. Supply any additional information or documents that may be relevant or useful to identify other sources who generated, transported, or disposed of hazardous wastes or substances at the Byron Barrel and Drum Site.

Response to Request No. 14: Borg-Warner has no responsive documents or information.

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In your letter of October 26, 1990, you indicate that the information must be submitted under the signature of an officer or other responsible corporate official and certified to be true and accurate. In our review of RCRA Section 6927 and CERCLA Section 104(e), we can find no provision requiring certification, under penalty of perjury, that the submitted information is true and accurate. Accordingly, Borg-Warner Corporation respectfully declines to certify this response. However, please note that in responding to this request, Borg-Warner Corporation has made diligent inquiry of its employees with knowledge of the information which was requested. The responses provided are believed by the undersigned to be true and accurate. Should additional information become available to indicate that a portion of response is inaccurate, this Borg-Warner Corporation will endeavor to so notify U.S. EPA.

Please contact me if you need additional information.

Dixie L. Laswell, One of the Attorneys for THE BORG-WARNER CORPORATION

Cc: Gaspare G. Ruggirello, Esq.
Thomas D. Lupo, Esq.
Michael Mintzer, Esq.

(TCLP) 9/90 SFECTURE

TOXICITY CHARACTERISTICS LEACHUR Procedure

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- NYS goal for PCBs in soil = 10 ppm
- NYS Groundwater Standard (secondary standard for odor control) = 0.001
 ppm PCBs

Table 6-2, "Analytical Test Results for Selected Parameters (On-site Sources)" summarizes the findings of the waste characterization phase of analyses. As shown in table, the York Oil wastes are typified by their elevated levels of PCBs, heavy metals (i.e. chromium, lead, zinc), and total phenolics. Also, it is presumed that the waste oil, when brought to the site, typically contained elevated levels of volatile organic compounds and polynuclear aromatic hydrocarbons (PAH) as indicated by the results of analyses of sludge from lagoon #1 (YO17). However, as the oil became weathered, the volatile organics dissipated into the atmosphere. This is supported by the lack of volatiles in soils down gradient of the lagoons (YO9 and YO9A).

Table 6-3, "Chemical and Physical Properties of Selected Parameters (On-site)" summarizes selected parameters for these onsite sources that were found to be indicative of the wastes disposed at the site. Properties of concern in assessing contaminant migration are density and the solubility of these pollutants in water and oil. Oil soluble contaminants, such as PCBs, will be expected to float on water in the oils in surface waters and at the potentiometric surface in ground waters. Water soluble contaminants, such as phenolics, depending on their density (> or <1), and the hydraulic conductance of the water-bearing materials can sink with

depth and can be expected to be found in elevated concentrations in deep ground water wells.

The PCB levels measured in Y0-17A (former lagoon #1 remnants) were below the detection limit of 1 ppm, however, this material had the highest levels of volatile organics and PAHs determined during this study. The reason for this is uncertain, but it is possible that since PCBs are known to be soluble in oils, they would tend to be concentrated in lighter density "floating" oils. Thus, during treatment at the site, they would have remained in the upper oil layer during transfer, via gravity, from lagoon #1 to lagoon #3. The PCBs would tend to be in higher concentrations in the lower lagoons and in oils that migrated via overland flow away from the site. This theory is supported by the fact that the greatest concentrations of PCBs were found at Y0-15 (former lagoon #3), the surface soils at Y0-9, and within off-site sediments.

The metal concentrations (i.e. chromium, lead, copper, and zinc) found in the oil materials at the site are common to waste oil, and are indicator parameters for determining source migration. For example, the lead concentrations in Tank #2 (10,000 ppm) and Y0-17A (16,200 ppm) indicate the source oil is extremely high in lead levels. The lead concentrations in the soils at Y0-9 (i.e. 70 ppm in surface soils) indicate the oils are migrating away from the source.